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ABSTRACT

The encouragement of creative thinking on the part of librarians is the purpose of this management guide. Every librarian has creative potential and the author discusses ways it can be developed. Included are discussions on the meaning of creativity, the need for creativity in libraries, traits of the creative librarian, steps in the creative process, how it can be encouraged, examples, and creative ideas for librarians. Of special value are the questions it poses to encourage the improvement of libraries. (Author)

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# CREATIVITY FOR LIBRARIANS

(A MANAGEMENT GUIDE TO ENCOURAGE CREATIVE THINKING)

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## PREFACE

Every librarian has a definite potential for creative activity. This potential may vary from individual to individual but the large differences are due more to failure in realizing inherent potential than to original limitations. Creative potential can be developed and this is the objective to which the present discussion is directed. Without creative thought, traditional and noneffective methods of library operation will remain unchanged. Librarianship needs improvement as much as any other profession.

Creative thought is high-level imaginative concentration that takes place in the individual mind. It is primarily an individual activity, and certainly one of the highest functions of man. No amount of discussion or explanation can make it simple and routine. A discussion such as this can only explain the process, stress its need and importance in librarianship, describe the traits of a creative librarian, give some interesting examples, and encourage librarians to develop their creative potential.

Although there is no recipe for making a mind original or creative, the author believes that some insight is possible into the operation of creative intelligence as an indispensable factor in high-grade thinking. That insight into the productive power of the human mind is the concern of this booklet. Hopefully, the result will be one of library improvement.

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Creative intelligence is responsible for all human progress. Behind our material civilization are initiative, enterprise, the impulse to create things, to improve things, and to move forward. Progress in all fields is the result of inventiveness, and behind inventiveness is imagination, a special quality of the human race.

Librarians, as a group, have a great mental storehouse of knowledge and ideas. Unfortunately, these ideas remain locked up in their subconscious minds. While intelligence is chiefly an accident of birth, every librarian can, by proper training, make greater use of his creative ability. The human mind can learn to be creative and have ideas just as it can learn to read and write.

There is hardly an area of librarianship which does not cry out for improvement - cataloging, reference, circulation, acquisitions, audiovisual media, administration. In nearly every case, the key is more and better creative thinking.

New ideas and problem solutions are created by changing old ideas and experiences. This is done by way of a processing or manipulation. Combine them in new ways, put them together in a new context of time or place, add other ideas to them, take something from them, change their shape, meaning, or purpose. We may do this accidentally and unconsciously, or we may do it deliberately and consciously.

Both Robert Louis Stevenson and Raphael are good examples. Stevenson developed his remarkable literary style by copying the styles of many distinguished authors. Raphael did the same thing in art. He never saw anything in a technique of any artist that

he did not try to incorporate into his own technique.

To create is not to form things out of nothing. Rather, it is to revise and put life into something that already exists in some form. It uncovers, selects, reshuffles, combines and synthesizes already existing facts, ideas, and skills. Everything that exists is the seed of that which can come out of it. Shakespeare, as an example, took themes and words from many now forgotten sources and wove them into new plays that continue to entertain and inform us.

MEANING AND NATURE OF CREATIVITY

Creativity is the combining of disconnected, apparently unrelated elements in a unique way to provide something useful. The more mutually remote the elements of the new combination, the more creative the process or solution. Creative people seek to solve a problem in a new way, intentionally, without having been taught how to do it. They have the ability to put Idea #2 and Idea #3 together and create Idea #5, which is both two and three, yet is really something entirely new and different from either two or three. These persons practice "divergent thinking" - the kind of thinking which is constantly attuned to new possibilities.

The creative process is similar to all problem-solving processes. We work with the information at hand. We bring to bear all our past experiences, distort them perhaps, combine them and recombine them into new patterns, configurations and arrangements, so that the new totality formed better satisfies a particular need.

Levels of Thinking. There are three main levels of thinking:

1. Habit Level -
   Thinking of this type is routine and unimaginative. It results from the conditioned response or trial and error method, and follows the beaten track. Work is performed according to standard procedures created from the plans coming out of the minds of other people. There is a dependence on memory of techniques and formulas.

2. Problem-Solving Level -
   This level of thinking is logical because it proceeds from facts which are either given or obtained. It follows the scientific method of defining a problem, analyzing, evaluating facts, and then making a decision.

3. Creative or Insight Level -
   Creative thinking, which is not always logical, is done when certain important facts are missing. Imagination is required to set up a number of hypotheses that can be checked, compared, and evaluated.

Knowledge, Intelligence, Judgment, Ability, Imagination, and Reasoning. None of these terms is synonymous with creativity. Knowledge consists of things that are known. Intelligence relates these things to things that are yet unknown and produces new ideas. It is intelligence that gives us the ability to discern relevant things, to put together things that ought to be joined, and to keep distinct things that ought to be separated.

Judgment, in comparison to creativity, confines itself to the facts at hand and delivers a verdict on the validity and appropriateness of the situation. Creativity soars beyond judgments on what has been and reaches out into the unknown. It takes the facts of two plus two and adds them up to five or seven or ten.

For example, judgment views two knives as two knives; no more, no less. They are dull or sharp, short or long, etc. Creativity, however, takes a look at two knives and views them not simply as two knives but also as one scissor.

Creativity differs also from the reasoning process. Reasoning uses the cold, conservative side of the mind. In fact, it can even block creative thought. As for outcome, reasoning does not always produce an original one. Creative thinking does. As to procedure, reasoning usually follows a rather straightforward course, through deep, well-marked channels. Creative thought, on the other hand, travels its own way, progressing toward the goal by irregular and unpredictable advances. Creative activity, more than reasoning, is characterized by the processes of incubation and illumination.

The human mind is not limited to the present (perception), nor to the past (memory), but can also anticipate the future (imagination). It can go ahead with the facts and beyond them. It can modify or recombine them. Einstein considered imagination as more important than knowledge. It has the capacity, however, to help or hinder, and needs direction and discipline. Alone it is uncertain and can easily run off the track wrecking the train of thought.

Creativity in most fields is associated with high intelligence. Actually, studies show that it is more dependent upon emotional expression than upon intelligence. Beyond a certain minimal level of intelligence, the possession of more intelligence does not guarantee a corresponding increase in creativity. Differences in intelligence are actually of little value in predicting creativity.

In other words, we cannot conclude that the more intelligent a person happens to be the more creative he is.

Creative intelligence has been considered too much as an uncommon gift, or an exceptional process. The truth is, all but the feeblest types of minds have some measure of creative intelligence. Practically everyone exercises some imagination. Creativity should not be thought of as a gift reserved exclusively for a few exceptional minds. Rather, it should be viewed as an essential phase of the act of thinking which all of us practice at one time or another.

It is true that much of the advancement mankind has made throughout history has been achieved by persons of outstanding ability. Many of them deserve the name genius. However, this genius is the product of both heredity and environment. Although intelligence is mainly heredity, it can nevertheless be changed by environment.

Generally speaking, anyone who is 40 per cent more intelligent than the rank and file is considered a genius. Listed below, as a matter of information, are the I.Q. ratings of some of the most distinguished names in history. In almost every case, the environment of their backgrounds played an important part in their becoming geniuses.

| | |
|---|---|
| 200 | Goethe, John Stuart Mill, Galton. |
| 190-195 | Leibnitz, Grotius. |
| 180-185 | Bacon, Milton, Newton, Pitt, Voltaire. |
| 170-175 | Chatterton, Coleridge, Luther, Robert Peel, Alexander Pope. |
| 160-165 | John Quincy Adams, Burke, Longfellow, Tennyson. |
| 150-155 | Samuel Johnson, Mendelssohn, Mozart, George Sand, Scott, Wordsworth. |
| 140-145 | John Adams, Emerson, Lincoln, Napoleon, Nelson, Thackeray, Washington. |

Synergistic Action. This term refers to the way in which two or more elements combined can yield a greater result than those same elements working independently; a sort of 2 + 2 = 5 proposition. The new idea is greater than the sum of the parts. A multiplying rather than adding process takes place.

This, then, is the stamp of the innovator. He transforms the often prosaic components into a new unity which, while it bears a resemblance to its antecedents, has discrete new properties of its own and a greater value. His imagination looks ahead, foresees, improves, completes, plans, invents, solves, advances, and originates. He makes a connection, closes the circuit, and allows his thought current to go through and produce an original result.

## NEED FOR CREATIVITY IN LIBRARIES

One of librarianship's greatest needs is for its thousands of personnel to become more creative in developing better ways of getting library resources into the hands of patrons. Unquestionably, it is possible for every librarian, by force of concentration and other disciplines, to tune in on uncommon frequencies and gather new ideas from many sources.

All around us are library jobs and operations being performed in the same manner as they were decades ago. Can we not imagine different and better ways of doing them? Are there not unusual resemblances and relationships that might apply? In a non-profit organization where competition and the profit motive do not exist, the pressure of creating new improvements is not so essential. Libraries change for the better very slowly because their existence

.s not dependent upon making a profit, satisfying a customer, or performing more efficiently than competitors. Librarians receive about the same salary whether they are creative or not; whether they improve a library or simply maintain it.

Back in 1912 an auto manufacturer advertised what he called his "Farewell Car." He called it that because it represented, so he said, all that was best in cars and could never be surpassed. It was, of course, a silly advertisement. But as librarians, we seem to be following the same philosophy; that is, holding on to 1912 methods because they can never be improved upon.

Discovery and invention are concrete and distinctive. None of us sits down casually and decides intensively to discover or invent. Rather, we are intrigued by a problem, stimulated by an idea, and consequently go to work to give it form and substance. Our originality is directed and drawn toward some worthwhile end.

Change. Change has been recognized as a permanent aspect of existence from the very beginning of Western culture. More than 2000 years ago, the Greek thinker Heraclitus noted that one universal principle of things is change. "There is nothing permanent except change," he said. "No one can step into the same river twice, because the river is never the same on two separate occasions."

Everything that exists, including libraries, is in a constant state of becoming something else. Change of thought or activity or direction is not naturally acceptable to all people. Those who do not expect change will, of course, be frightened by it. But it is the wise librarian who makes allowance for it.

Change is especially characteristic of America. Our free-

enterprise system encourages and rewards enterprising people - people who are not content to remain static, but who initiate innovation and worthwhile change. At the heart of this system are two powerful forces - the hope of profit and the discipline of competitive markets. The hope of profit is the mainspring of most constructive change. Competition is the spur that transforms new ideas into new products and services at the lowest possible price. Unfortunately, neither of these two powerful forces exist in librarianship.

In our free-enterprise system, the pressure of competition results in a rapid spread of the changes to other firms, thus opening up additional areas of investment opportunity and creating more jobs. This spreading of contributions throughout industry may be as important as the innovation that stimulated them.

Pressure of this type simply does not exist in librarianship. Libraries are not in competition with one another and therefore not obliged to copy or adopt new and better methods of operation.

Conformity. The great American philosopher William James considered man to have a basic pre-disposition to avoid change - an attitude that becomes increasingly evident as we age. "Most of us," he said, "grow more and more enslaved to the stock conceptions with which we have once become familiar, and less and less capable of assimilating impressions in any but the old ways. Old fogyism, in short, is the inevitable terminus to which life sweeps us on."

What is conformity? It is a conflict between what a person says or does and what he really thinks or would like to do. There are three basic types of conformers. The "cognitive conformer"

is one who accepts the opinion of the group as being the most likely source. The "expedient conformer" believes he has the right answer but will adopt a wrong group answer anyway. He himself is an authoritarian. Finally, the "passively suggestible conformer" lacks confidence in himself and his opinion. He readily accepts the group's opinion.

In any type of organization the conformist makes a good team player. However, he is not high on originality. Studies show that women appear to conform more than men, and that conformity tends to increase sharply when people work on a group task. In librarianship, where the majority of employees are women, it is important to strive for a balance between creativity and conformity. Both are necessary.

Libraries must, of course, be organized, routinized, and planned in some way to carry out the various stages of their operations. And to the extent that planning is needed, we get rigidity and order. No organization can have every employee running off uncoordinated in several different directions at once. There must be rules, policies and standards. However, there must also be creativity.

As librarians we are, to a rather high degree, imitative and conventional. We follow set patterns of thought. Sometimes we follow them with a slight variation and originality of our own. If nothing more, this originality in imitation gives us at least a share in the experience by which knowledge is advanced.

Deterrents to Creativity. Librarians wanting to be creative and inventive will do well to avoid associating with incurable critics of ideas. These persons, whether they are superiors,

associates, subordinates, or college presidents, have the power to use their criticism to destroy many good ideas. If you find that such persons are unable to combine your idea with a better one, then it is better to avoid their thoughts. Thomas Edison once commented that "no sooner does a man bring out a brilliant and practical idea, but some ignoramus must interfere and try to show some reason why the scheme is impractical."

A great discourager of originality is convention. Adapting one solution prevents the working out of another; even from seeing that there may be others. What <u>is</u> gets in the way of what <u>may be</u>. We copy rather than create. Yet, if we merely repeat and remain completely set in our ways, we stagnate.

It is possible to accept the convenience of routine and still reap the benefits of creative thought. There is ample room in librarianship for both orders of thinking - for following accepted patterns intelligently, and for creating patterns of our own. Creativity always includes both. But without imagination, thought comes to a standstill. We simply exist by using a ready-made set of ideas.

Why does so little of our thinking tend to be creative? In the first place, most of us are immersed in a mass of practical decisions related to getting the day's work done. We are simply preoccupied. Secondly, many of us are busy rationalizing and defending the opinions we already hold. So much of our thinking goes into finding arguments for continuing to operate as we do. It is easier to justify than to improve.

There are many deterrents to creativity. Listed below are perhaps the major hindrances:

1. Pressure to Conform -
   There are strong group pressures in librarianship to conform. Pressure also comes from library boards, school officials, and various groups.

2. Fear of Failure -
   Nothing fails like failure, so we avoid making a mistake at all costs. It is better to be safe than sorry.

3. Natural Resistance to Change -
   Librarians are like most other people in resisting change. They prefer the ruts they get into because they know them so well. It is possible to become highly efficient at doing something the wrong way.

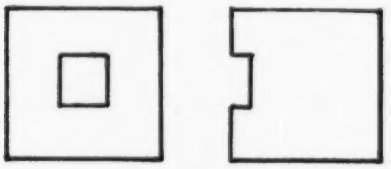
4. Lack of Confidence -
   This stems mainly from a lack of experience. Few library directors ever make a special effort to encourage staff members to make use of their creative imaginations.

5. Laziness -
   Creative thinking entails the hardest kind of mental effort. Unless there is some type of worthy incentive, librarians prefer the status quo. Life is so much simpler that way.

6. Fear of Ridicule -
   This is ingrained in most people through having had their ideas laughed at or ignored sometime in the past. It is still common practice today for us to criticize or laugh at unusual or different ideas before we have taken the time to really think about them. Anyone in the position of directing the efforts of others has responsibility for creating a climate that provides for the freedom to fail. Failing can be productive.

7. Habit.
8. Lack of Knowledge.
9. Pessimism.
10. Timidity.
11. Emphasis on Judgment in School.
12. Obvious Assumptions -
    One of the best ways to show how common mental blocks can hamper the person in

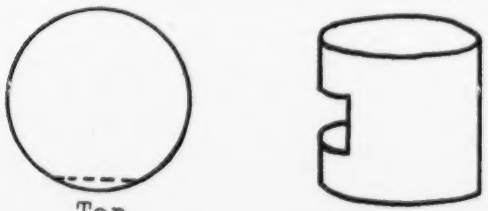
search of ideas is to present a visual illustration. Given below are two drawings of an object - the front view and a side view.



Front Side

Draw the top view.

Chances are you will draw the top view as a square or rectangular shape. However, this particular object is a cylinder. The square on the front view and the notch on the side view show a small rectangular area milled off the cylinder. Therefore, the top drawing should be a circle.



Top

Why did you try to make a square or straight-sided figure? Probably because you were hampered by a perceptual block. Two dimensions of the object appeared to be square, so your mind immediately short-circuited to make the third dimension square also. You can easily see why it is sometimes difficult to prevent yourself from being forced into an obvious assumption about a third factor that may completely mislead you as to the course of creative action you should take. For this reason, it is wise to develop a healthy skepticism about the obvious.

One reason it is so difficult to sell librarians on a new idea is that organization exists to create the amount and kind of inflexibility that are necessary to get the most pressing jobs done in a routine manner. Creativity and innovation disturb that

order. New ideas get in the way. Changing a system or the organization of resources is a major project and affects the routine of operations.

Expressions That Restrict Creativity. Any librarian who is interested in library improvement and has tried to initiate new methods of operation has, at various points in his career, heard negative expressions which have had the effect of discouraging him in his efforts. They are being listed here not as something new but rather for the purpose of exposing them as harmful statements that destroy rather than encourage creativity and experimentation. Persons making such statements follow the practice of discarding an idea in its entirety, failing to see the various elements of the idea, one or more of which may have application in some manner or degree.

1. "It won't work in our library."
2. "We tried a similar idea before."
3. "It's too radical."
4. "The budget won't allow for it."
5. "Don't be ridiculous."
6. "It will make our system obsolete."
7. "Why change it? It's still working o.k."
8. "We did all right without it."
9. "Has anyone else tried it?"
10. "It's against our policy."
11. "The Library Board would never go for that."
12. "It's not practical for our particular library."
13. "You're years ahead of your time."
14. "That's not our problem."
15. "The library staff doesn't have time to implement the change."
16. "The initial cost is too high."
17. "Our library is too small for it."
18. "Nobody ever did that before."
19. "Let's get back to reality."
20. "We're not ready for that."
21. "Let's have a committee evaluate it."
22. "It's different."

Statements of the type given above, made by supervisory personnel, can be very influential in stifling library development.

TRAITS AND CHARACTERISTICS OF THE CREATIVE LIBRARIAN

Distribution of creative contributions to librarianship is like the distribution of personal income; a small percentage of people accounts for a large share of the total. How do creative librarians differ from those who are not? They differ not only in the way they approach librarianship but also in the way they approach situations far removed from their profession.

It is characteristic of creative librarians to live largely in the future; planning for the future, mapping out the route to be taken, working toward realization of their goals. All this is part of their joy in working. The aim is to advance.

Being sensitive to problems, the creative librarian works out ways of approaching their solution. He adopts what is applicable from other solutions, borrows some of the methods other people have used, both in and out of librarianship, and adds a few touches of his own.

There are numerous other characteristics that describe the creative librarian. Given below are perhaps those of most importance. Indeed, few persons have them all to a great degree. But it can be said that the more of such traits found in a person, the higher his creative ability is likely to be. For those librarians wanting to be more creative, the list certainly has value.

1. Imagination -
   Creative thought goes beyond the obvious boundaries of a problem. For example, list the possible consequences of a particular situation; e.g., a college president makes it a practice of using the second floor of the library for cocktail parties and social functions,

without notifying the library director; or, a college library discontinues the policy of circulating resources.

2. Fluency -

Idea fluency is the ability to generate a large number of ideas and alternative solutions rapidly. The value in doing this lies in the fact that the more ideas a person has, the greater his chances of finding a usable one. Fluency also refers to the ability to take continuous advantage of a developing situation; to use each completed step as a fresh vantage point from which to plan the next move. Sculptors, for example, usually do not begin with an elaborately preconceived plan. Rather, they start with an idea and let the creative process develop, step by step.

3. Questioning Ability -

One of the most noticeable characteristics of highly creative people is their overwhelming curiosity. These people are always asking themselves and others: "Why do we follow this procedure?" "Is this work really necessary?" "How can we improve the way we do this?" The person who does not have this deep interest in questioning will probably never be very creative.

Any librarian who is fired with the spirit of inquiry, who has developed a healthy skepticism rather than a complacent acceptance, is certain to be aware of library problems that less sensitive people ignore. He views problems in such a way that his past experience does not limit him to what has been done before. Rather, it opens up new vistas which he can freely explore in his search for new components important to his innovation.

Creative librarians are not fully satisfied with traditional methods, and have ideas for improving them. They are aware, for example, of all the inadequacies of such things as the common vertical file system, and they continue to seek ways to improve it. They are sufficiently critical of any system to distinguish the essential from the

unimportant. Their belief is that all of man's accomplishments to date can be improved upon.

4. Originality -
   This trait denotes an ability to give unusual and unique responses to questions, situations, and problems. The creative person brings together seemingly disparate ideas to form a new totality. Some of the components have always been logically incompatible until he brings them together for the first time.

   Originality is a form of learned behavior and can be developed by deliberate practice. Alone it does not, of course, constitute creativeness. Results must be forthcoming. The originality required of a librarian is most commonly that of finding new ways to vary existing conditions. Opportunity for uncovering and applying original concepts to library operations is never-ending.

5. Flexibility -
   This trait is one of recognizing that there are many ways of interpreting the same situation. It means being willing to consider a wide variety of approaches to a problem.

   Creative flexibility is largely a matter of attitude. Rather than obstinately freezing onto a single approach, the flexible person starts out by remembering that if one solution fails, he can always shift gears and approach the problem from another angle. He has what might be termed "creative expectancy," meaning that he flatly expects to solve the problem, no matter how many failures temporarily delay the solution.

   Studies show that flexibility allows the creative person to produce more ideas per unit of time, covering a wider range of human experience, than those who are more routine and prosaic. He lets ideas flow completely uninhibited, knowing that he can evaluate them later. Persons who insist on evaluating as they

create find it extremely difficult to develop new ideas.

Flexibility also refers to the ability of an individual to adjust quickly to new developments and changing situations. Happy accidents are likely to occur in carrying out any project. A noncreative person tends to be distressed by such developments because they were not part of the plan. But the creative individual moves swiftly to take advantage of the developments, adapting his plan to include the fullest exploitation of the windfall.

Highly creative people are simply not fixed or static. Instead, they view themselves as processes rather than products; as continually changing bodies of potentialities.

6. Independent -
   Studies of creative individuals show that there is a relationship between independence of judgment and originality. They insist on freedom from the restrictive effects of dependency relationships with others.

7. Ability to Synthesize -
   The creative person has the capacity to take material that has not been related by nature or man and put it together in a homogeneous manner. Elements are combined in a creative way to form a new whole. This organizational ability applies not only to ideas and concepts, but also to people and things.

8. Ability to Abstract -
   This trait is one of proficiency at breaking down a problem or project into its component parts, and comprehending the specific relationships among them. It is the skill of analysis. Without it, no truly creative work is possible. The noncreative person keeps looking at the whole problem as one big stubborn mass, while the creative person starts breaking it down into bite-size chunks.

   There is a close correlation between a person's ability to abstract and his

observance of the details in his everyday environment. For example, the observing person will know where the green signal is on a vertical stop light.

9. Sensitivity -
A universal characteristic of creative people is their sensitivity to problems, attitudes, feelings of others, and the experiences of life. They seem to have a heightened awareness of anything that is odd, unusual, or promising.

This is not only an ability to recognize that a problem exists, but also one of being able to cut through misunderstanding, misconception, lack of facts, or other obscuring handicaps, and recognize the real problem. It is a fact that every library operation can be improved upon and someday will be. In every situation a librarian encounters, an opportunity exists to find a better way.

10. Intelligent -
Although there is a correlation between creativity and intelligence, it is a fairly low one. Creative individuals tend to prefer the complex rather than the easily understood. However, it is also true that even the retarded can have rich and very creative imaginations.

11. Challenged (rather than confused) by Disorder -
Chaos, which is often threatening to the ordinary person, is often the delight of a creative individual. He finds a challenge in making sense of chaotic conditions. Unique problems he has never experienced are of special interest to him. He will probably get more involved in such problems, and work harder and longer without the incentives of salary and recognition. A creative librarian may be challenged, for example, in finding the least expensive and least time-consuming method of processing non-book resources. The noncreative librarian is satisfied with the way it is presently being done.

12. Persistence -
Practically everyone has ideas at one time

or another, but few people are willing to put forth the necessary effort to develop those ideas. Creativeness is marked by persistence and follow-through of an original idea to fulfill a particular purpose.

13. Drive and Courage -
A very basic requirement of the creative personality is the willingness to gamble, to take a chance, and to channel drive into daring, creative directions. Both energy and courage are essential to carrying any new idea through to a tangible result. The drive is emotional, mental, and physical. Rhetoric is plentiful in librarianship; courage to gamble is not.

14. Theoretical and Aesthetic Values -
Creativeness often goes hand-in-hand with a system of values placing high worth on the search for truth and the appreciation of beauty. Creative people seem to have a highly developed aesthetic sense. Although many librarians have these values, they are certainly not all creative. More is required than simply aesthetic values.

To this list we can, of course, add other desirable characteristics, such as good memory, power of concentration, sense of humor, perception, insight, patience, and the ability to articulate. But the most unique traits of the creative person are those discussed above. Any librarian can heighten his creativity by studying these 14 attributes and consciously setting out to cultivate and practice them in his work.

## STEPS IN CREATIVE THINKING

Creativity is rarely a matter of step-by-step progress. It is more often a pattern of large, unpredictable leaps after relatively long periods of no apparent progress. Creation comes not by intent alone nor at the call of strenuous exertion. It

seems to wait on pleasant conditions which make for a hospitality to suggestions. Periods of idle relaxation and leisure reflection often provide such conditions.

New developments and improvements in librarianship do not ordinarily just happen. Rather, they are made to happen by librarians who follow the hints and suggestions coming out of active minds. They know that an imagination can be developed like a muscle, and that we can learn how to create ideas just as we learn any other skill.

Normally, there are several basic steps involved in the creative thinking process. Because originality is deviation from the accustomed, it is well to start with the experience of present routine. Every new idea is actually a manipulation of old experiences and related knowledge we already have. Thus, a degree of both experience and knowledge are assumed in following the steps given below.

1. Sensing and Questioning -
   The creative person must first be able to sense a problem area; a deficiency. It may be obvious or subtle. It may be the sensing of something out of order, in an otherwise orderly procedure. Or, it may be the recognition of inadequate reasons for performing a certain library operation. In any event, the result is a question, fed by more questions.

   Shortly before he died, Einstein was interviewed and asked what he thought was the most important attribute of the successful innovator. He answered without hesitation that it was "an insatiable curiosity; a driving spirit of inquiry." We might add to this thought that the creative person also tries very diligently to answer his own questions.

2. Observe and Prepare -
This is a matter of making careful observations in order to get the data, establish conditions, and assess the range and variation of unknowns. It necessitates a recalling of past related experiences and also the study of new material.

Creative ideas actually come forth from the subconscious mind as a result of the conscious mind's concentration on known thoughts related to the problem. The role of preparation is that of supplying the mind with the necessary collection of information which can be sorted, rearranged, and brought into association to suggest a new hypothesis or solution.

The process of observing can be a problem itself. It is not easy to avoid the pitfalls of pre-conception, projection, and the rigidity imposed by past experience. The creative person will take a number of different looks at a situation, observe in the broadest possible context, and always be on the lookout for the unexpected.

To illustrate how many of us see what we want to see, hope to see, and expect to see, we can use the following picture:

For those seeing this picture for the first time, the probability is very high that they will see a young woman with her head turned away. This seems to be the obvious. Yet, if you avoid the obvious and take another look, you may also see an old lady. Once you have both the young lady and the old lady in the same picture, chances are you will be able to shift your attention at will so that you can see one or the other. Does this not indicate that seeing is internally directed? As Heraclitus once said, "you will never find the unexpected unless you are looking for it."

3. Wild Thinking -

This involves giving the mind full freedom to develop possible solutions to a problem. All existing ideas and knowledge are applied in all possible combinations. Some thoughts may well be impractical.

The human mind seems to have an area that thinks up ideas and another that criticizes them. The key is to keep these two areas from interfering with each other. In other words, we should not at this step begin tearing a new idea to pieces, trying to find all the reasons why it may not work. Instead, we should use all our energy to create more ideas and disregard how far-fetched they may sound. Ideas beget ideas and the more we have the better the chances are of obtaining some good ones. A future step will help us to evaluate them.

4. Incubation -

Incubation refers to the subconscious activity which precedes an insight or inspiration. The conscious mind is the center of logical thinking but is limited because it deals with known ideas and does not create ideas of its own. The subconscious mind directs itself to problems which are of interest to the conscious mind. We are not aware of its activity until it creates and submits a new idea to the conscious. Its output is different from any of the input and

greater than the sum of the input.

Many artists will incubate an idea for months - working on it occasionally and forgetting it temporarily - before it develops into a usable project. Most creative thought gives evidence of this type for the phenomenon of incubation.

5. Illumination -
   This phase of the process may occur while a person is taking a walk, driving home from work, arising in the morning, taking a shower, or during some other period of mental relaxation. Illumination is the formulation of the central idea, form, or design on which the innovation is based. The idea or plan often comes to mind very suddently, in a flash of insight.

   Here is what actually takes place. After concentrating on the problem, the conscious mind relaxes and is no longer occupied with the matter. The subconscious then goes to work and ranges freely through its stored data, sorting and reorganizing until a solution is suggested and transmitted as an illumination.

6. Revision and Evaluation -
   It is now time to refine and polish the central idea; put it into finished form. We stand back and look critically at our efforts, recall our main purpose and people involved, and look over the general effects and details. We judge the relative advantages of alternative solutions and weigh the pros and cons. If the finished product looks good, we are done. If not, we may begin the creative process anew.

7. Application -
   The final step is that of putting the idea to work. New ideas are worthless until they come into full form and are available for consideration by those who can use them. There is a considerable distance between expression of an idea and application.

Rules of Creativity. Anyone seriously interested in the art of creating new ideas can improve his score by following certain

basic rules. Five are mentioned here:

1. Rule out judgment during the initial process of creativity. Withhold criticism until later. Forget about the opinions of others.

2. Encourage free-wheeling. The wilder the ideas the better. Look for apparently trivial, irrelevant aspects of the problem.

3. Strive for quantity of ideas. Out of this will come quality. Build up your idea sources; e.g., conventions, travel, reading, other libraries, industry, etc.

4. Look for combination and improvement. One idea can hitch-hike onto another. Build big ideas from little ones. Listen to complaints.

5. Record flashes of insight on paper. Often they come unexpectedly and must be trapped. Build an idea reservoir. Do not fear working alone.

Good ideas are around us all the time. Often they are disguised as the commonplace. Whatever rules and techniques are most effective in bringing them to light, those are the ones to use. Not everyone can be an Edison or Einstein, but all of us can be more creative than we are.

## ENCOURAGING CREATIVITY IN LIBRARIANSHIP

Answers to creative problems in librarianship form a complete spectrum that has no closing on either end. It is relatively easy for us to imagine a worse solution than any now in the spectrum, and almost as easy to imagine a better solution.

Every procedure now in use, whether it be in librarianship or in the production and distribution of goods, was at some time or other new to the world. To put these procedures into use there had to be daring men and women who saw visions of better ways.

Librarianship continues to need daring people, courageous enough to originate, break from tradition, and try new methods of operation.

Questions to Encourage Library Improvement. The practice of looking at everything being done in the library with a fresh eye is a good one for every library director to follow. Ask questions such as: What else? How else? Is it really worth doing? Can the operation be made self-serve? Can the system be simplified so that a clerk can perform it? Can work tasks be organized in a way to keep everyone on the staff busy at all times? Are there other valuable functions our library can perform?

Librarians may find many improvements to be made by reviewing the following checklist:

1. METHODS -
   Can you...
   - improve operations?
   - group or combine tasks to eliminate positions?
   - utilize certain methods used by industry?
   - devise new and better methods?
   - improve quality of service?
   - make greater utilization of personnel?
   - install self-serve methods?
   - reduce the frequency of a task?
   - convert jobs to part-time positions?
   - eliminate or reduce low-priority work?
   - increase use of library?
   - replace a professional with a nonprofessional employee?

2. PROCEDURES -
   Can you...
   - eliminate unnecessary duplicate work?
   - simplify present procedures?
   - improve procedures and systems?
   - combine, simplify, or eliminate forms?
   - eliminate unnecessary copies?
   - save time or money?
   - reduce chances for errors?
   - eliminate obsolete records?
   - conserve supplies?
   - reduce costs by contracting for certain functions?
   - reassess the need for written reports?

use a form letter instead of a dictated letter?
eliminate work by changing a procedure?
speed up the procedures of acquisitions and cataloging?

3. EQUIPMENT -
   Can you...
   improve output in the Technical Services area?
   reduce maintenance costs?
   combine two or more operations?
   improve performance?
   save processing time?
   improve design or construction of equipment?
   simplify or eliminate equipment?
   replace an employee with a machine?

4. MATERIALS AND RESOURCES -
   Can you...
   eliminate rehandling?
   reduce waiting time?
   simplify handling?
   reduce waste and losses?
   speed retrieval and the shelving of resources?
   eliminate nonessential supplies?
   increase circulation of resources?
   eliminate wasted space, disorderly arrangement of resources and supplies, and little-used equipment?

5. WORKING CONDITIONS -
   Can you...
   improve safety measures?
   reduce fire hazards?
   improve library housekeeping?
   minimize unnecessary conversation?
   reduce employee fatigue?
   improve communication?
   offer periodic training sessions?

Industry is constantly looking for better methods, procedures, equipment, materials, and working conditions. A good example showing the value of a better method took place in a plant that was spray-painting bedsprings automatically. Drips and "tear drops" were a big headache. The engineer tried all the obvious ideas. He speeded up spraying, then slowed it down; changed the paint consistency, surface preparation, drying heat, and air flow. None

of the changes worked. Then, somebody came up with the bright idea of whacking the springs automatically with a synthetic rubber hose. It worked. Paint flew off like dust from a rug when beaten. The idea saved enough paint on each bedspring to paint the next one.

Another plant had a problem connected with drilling holes in a plastic fitting. As the plastic got warm, the drill kept gumming up. Creative thinking brought forth the idea of stocking the plastic parts in a deep freeze next to the operator's bench. Now he drills them while they are cold and hard. The plastic shreds easily.

Selling an idea often requires about as much imagination as it does to conceive it. In librarianship, as in other areas, ideas are turned down for many reasons. An idea may seem strange simply because it is new. It may be rejected because of minor defects, or because it sacrifices certain features of the present system. Or, it may be turned down because illogical evidence is used to support it. Invariably, someone will oppose it because of its effect on someone's job. The ultimate criterion, however, is the over-all effect on performance of the library as an entity.

## CREATIVE WORK OF THE HIGHEST ORDER

Any discussion of the creative process would be lacking without mention of the lives and works of certain well-known geniuses. Their efforts truly represent creativity of the highest order. Important to note is the fact that age has no bearing on creativity.

Macaulay, for example, compiled a universal history at the

age of seven. John Ruskin wrote verse at age six. William Blake, Thomas Chatterton, and Alexander Pope published their poems when they were 12 years old. The poems of Robert Burns go back to his fourteenth year, and of Milton to his 15th year. Pascal wrote a treatise on acoustics when he was 12. Perkin discovered the first synthetic dye when he was 18, and Farnsworth evolved an electronic means of sending pictures through the air when he was 15.

In the field of music, Mozart played the harpsichord at three, was composing at four, and went on tour at six. In 1972, a 10-year old Canadian boy named Brian Laeser joined Mozart as the only other composer ever to have written a full symphony before age 10. His Symphony No. 1, written when he was nine, was recently performed by the Delta Youth Orchestra of Vancouver, with Brian playing the piano.

Handel played the clavichord as an infant and was composing by the age of 11. Haydn played and composed at the age of six. Chopin played in public at age eight; Liszt, at nine; Verdi, at 10; Schubert, at 12; and Rossini at 14. Mendelssohn was playing publicly and also composing by the age of nine, as was Debussy at 11, Dvorak at 12, and Berlioz at 14. Wagner conducted one of his own compositions in public when he was 17.

John Stuart Mill, one of the great intellects of all time, began the study of Greek at three. By the age of eight he had read Xenophon, Herodotus, and Plato, and had begun to study geometry and algebra. At 12 he focused his attention on logic, reading Aristotle in the original. The following year he began the study of political economy, and three years later was publishing con-

troversial articles in that field.

Although history shows that much of the creative work of these giants was done at an early age - Keats died at 26 and Schubert at 31 - there are many other examples where creative work was done in the later stages of life. Milton did not begin writing his PARADISE LOST until he was 50. Goethe began the writing of FAUST at 57 and wrote the last part at 82. Victor Hugo wrote LES MISERABLES at about 60. Handel's MESSIAH was composed at 56, Wagner produced his best music between the ages of 46 and 69, and Beethoven was composing his best music at the time of his death at 57. Age, therefore, has little to do with the process of creative thinking.

CREATIVE IDEAS FOR LIBRARIANS

Better ideas often are born out of one person's recognitior of a need. History is full of examples. Back in 1787 Levi Hutchins developed the alarm clock because the practice of arranging shades and mirrors to direct the early sun rays upon his sleeping eyes did not work at 4 a.m. on winter mornings. The French artist Antoine-Joseph Loriat, in 1745, was dissatisfied with the smearing of colored chalk and water colors, so he developed the crayon by mixing powdered pigments in beeswax. In 1889, Humphrey O'Sullivan got tired of co-workers stealing the rubber mat used to protect his feet from the hard factory floor, so he cut out and nailed pieces to his leather heels and created rubber heels. More recently, Kenneth Taylor saw a need for the Bible to be re-written so that everyone could read and understand it. So, he spent six years writing THE LIVING BIBLE. In 1972 it

became the number one best-seller.

Occasionally, an idea occurs by accident. For example, the removal of caffeine from coffee was an unsolved problem prior to 1903. Then, by accident, a ship loaded with coffee from South America arrived with its contents soaked in sea water. Ludwig Roselius experimented and discovered that caffeine could easily be removed from coffee beans soaked in salt water.

There are many unfilled needs and unsolved problems in librarianship. Included are such problems as delays in cataloging and processing, high binding costs of periodicals, complicated filing rules, increasing use of libraries for social functions, inefficient methods of inter-library loan, errors in circulation procedures, destruction and loss of resources, inefficient vertical files, non-compliance of library policies by faculty members and privileged groups, lack of cooperation among libraries, and many other deficient areas of operation. Creative librarians recognize these problems and seek to discover the means to solve them.

Actually, there is probably no shortage of creative people in librarianship. The major problem is that the majority of librarians pass off onto others the responsibility for putting their ideas into action. They have ideas but do not make sufficient effort to apply them. Implementation is not carried through. Scarce, indeed, is the librarian who has the know-how, energy, courage, and staying power to implement new practices and novel ideas.

Given below is a brief listing of 25 selected thoughts directed

specifically to the director who is seriously interested in improving his library. Hopefully, one or more will trigger an idea that leads to greater efficiency.

IDEAS FOR CONSIDERATION

1. Develop a Specialty Collection -
   Give thought to developing an area of specialty for which your library can become known nationwide. Put your library "on the map" by doing something better than any other library in the world. Create a special collection of resources that represents authority in a particular subject area; e.g., Earlham College is known for Japanese art. It might take the form of a regional literature or local history collection.

2. Separate Non-Book Collections -
   Consider separate collections, with separate card catalogs, for non-book materials such as pamphlets, filmstrips, audio-tapes, film loops, recordings, etc. The "Sha-Frame Pamphlet System" can be used by any library. (Write author for manuals on developing a pamphlet library and collections of other non-book materials.)

3. Publish Bibliographies for Patrons -
   Publicize library resources by printing bibliographies of resources in specialized subject areas; e.g., "Black Culture Resources"; "Resources for Nurses"; "Reference Sources"; "Filmstrips"; "Audio-Tapes"; "Art Resources". Cater to special groups who actually need and use the library.

4. Self-Instruction Project -
   Consider setting up a self-instruction project, such as a programmed biology lab for the non-science major; an independent learning approach to music sight reading; or, an audiovisual tutorial course in physical geography.

5. "Free Table" -
   Set up a "Free Table" at the front entrance. Instead of burning unneeded materials, discard them on this table.

There is always someone interested in every subject area. Duplicate gift books, periodicals, leaflets, the library handbook, bibliographies, and weeded materials are all appreciated by patrons.

6. Divided Catalog -
   Advantages of the divided catalog are many. Small libraries should consider a division by subject and author/title. It makes for better organization.

7. Variety of Resources -
   A true resource center will contain much more than simply books and periodicals. Included will be a variety of non-book instructional resources; i.e., films, filmstrips, film loops, photographs, cut pictures, charts, maps, pamphlets, models, kits, study prints, transparencies, video-tapes, audio-tapes, slides, micro-forms, etc. Expand the variety of resources in your collection.

8. Share the Shelf-List -
   Give thought to placing the shelf-list catalog in a location for public use. Anyone conducting research will find it valuable.

9. Audio-Taped Lectures -
   Many school libraries now place audio-tapes of course lectures on reserve. The tapes serve as supplementary resources, as make-up and study material, and as a substitute for teachers who are absent. (Write author for free catalog of taped lectures.)

10. Searching for the Unusual -
    Libraries and librarians exist as sources of information. There are persons in every community who continually search for antiques and unusual items - from 19th century flycatchers to electric clock motors that run backwards. Public libraries can help people find not only information but also unusual items.

11. Written Manuals -
    Few libraries have instructional manuals covering every library operation. One of the first to be prepared should cover

the details of Technical Services procedures. Good administration requires that all procedures be recorded in a manual. Needed also are written job descriptions for every position in the library, and written rules for filing catalog cards. (Write author for a copy of "Library Job Descriptions".)

12. Suggestion System -
    Provide a convenient means for patrons to suggest improvements and recommend new titles for purchase.

13. Accept All Gifts -
    Show a willingness to accept all books and periodicals from donors. Establish a written policy stating that the library will accept all gift materials, but only on condition that it be allowed to do as it pleases with them. Encourage the gift of NATIONAL GEOGRAPHIC magazine. Its contents can be used to develop an excellent picture file collection.

14. Offer an Audio-Visual Course -
    Consider offering a course in the production of audio-visual media; e.g., methods for producing overhead transparencies, slides with synchronized sound, mechanical lettering, spray-paint lettering, charts, posters, felt boards, magnetic tape recording, displays, etc.

15. Reduce Expensive Cataloging -
    All types of library resources need not be classed and cataloged in the same manner. Bound periodicals, for example, can be organized efficiently and simply without the need for expensive cataloging procedures. Pamphlets and non-book resources likewise can be organized more economically and efficiently than by the LC or Dewey schemes. (Write author for a copy of "The Filmstrip Collection".)

16. Smoking Area -
    Offer patrons the convenience of a designated smoking area. Every library needs one.

17. Self-Serve Reserve Room -
Some college libraries allow students to help themselves when using reserve materials. Resources are housed in a supervised room or area where students are checked in and out. The idea has many advantages and can work very successfully.

18. Circulate Non-Library Items -
The Hastings High School Library lends cameras. FM radios are checked out by several libraries in Wisconsin. The Animal Lending Library at the Sacramento Junior Museum lends animals - from hamsters to skunks. Jigsaw puzzles are exchanged at the public library in Clearwater, Florida.

19. Telephone Directories -
Every public and college library needs telephone directories covering cities throughout the state, plus New York, Washington, and Chicago. They are usually provided free-of-charge by the Bell Telephone Company.

20. Video-Taped Plays and Orientation -
Students of English literature can benefit greatly from video-tapes of Shakespeare plays. Library orientation can be simplified through the use of video-tape.

21. Pre-School Library -
The Erie Public Library operates a special library for pre-school children where tots borrow books, records, tapes, and animals. In Gravesend, England the school system set up a toy library. The fee for borrowing toys ranges from six to 12 cents for a two-week loan.

22. Curriculum Materials Center -
Every teacher-training institution needs a Curriculum Materials Center. It provides a collection of special materials intended to support certain courses and levels of learning; e.g., elementary and secondary. Included in the collection are texts and work-books for each level, kits, maps, study guides, pamphlets, book jackets, filmstrips, tapes, transparencies,

models, and pictures. Each type of material is classified and cataloged in a special way, with every item having a unique call number. Curriculum materials should be cataloged as a separate library collection and not as part of the main collection. As a special collection, it deserves its own card catalog and classification system.

The author suggests that books be separated into two collections - elementary and secondary. Perhaps the major problem is one of designing a classification system that permits browsing and, at the same time, organizes material by level, general subject area, and publisher. A sample call number will illustrate how it can be done.

| | |
|---|---|
| CMC-E | = Curriculum Mat. Ctr. - Elem. |
| (1) | = Dewey 100 subject class. |
| M-12 | = Macmillan book accessioned #12. |
| c.2 | = Copy 2. |
| 1970 | = Edition |

This system applies to book material only. Other types of material are numbered differently. (Write author for manuals on organizing collections of filmstrips, pictures, pamphlets, tapes, etc.)

23. Picture File -
Every library needs a picture file. The cost is small and the procedure simple. (Write author for a copy of "The Library Picture File".)

24. Display Maps -
Every library should have at least four large wall maps hanging permanently on its walls - local, state, U.S., and world maps. The location should be one of convenience for patrons.

25. Monthly Report -
Every library director should prepare and disseminate a monthly report covering the status of his library. It should cover, at least, the areas of (1) resources, (2) expenditures, and (3) improvements. (Write author for a sample form.)

Obviously, this list could go on and on. The selected ideas mentioned above are not necessarily the best, the newest, or the most creative changes occuring in libraries. They simply represent creative thinking going on in the minds of certain librarians. Unfortunately, there is no publication now available which has as its purpose the collection and dissemination of new library ideas. Consequently, a comprehensive listing would be most difficult to prepare.

Librarians have, for some time, been concerned about their public image. Actually, the basic image has changed very little through the years. Whatever change occurs in the future will depend, to no small extent, upon how effective librarians are in manipulating old ideas and experiences, and in making use of their creative potential. Hopefully, this booklet will serve to encourage the productive manipulation of these experiences.

"Look for your own. Do not do what someone else could do as well as you. Do not say, do not write what some one else could say, could write as well as you. Care for nothing in yourself but what you feel exists nowhere else - and out of yourself create, impatiently or patiently... the most irreplaceable of beings."

Andre Gide

## PUBLICATIONS FOR THE LIBRARIAN

1. THE PAMPHLET LIBRARY - USE OF THE SHA-FRAME SYSTEM. (14pp.) 1972, $1.00

2. THE LIBRARY PICTURE FILE - A COMPLETE SYSTEM OF HOW TO PROCESS AND ORGANIZE. (11pp.) 1972, $1.00

3. THE FILMSTRIP COLLECTION - COMPLETE INSTRUCTIONS ON HOW TO PROCESS AND ORGANIZE. (25pp.) 1972, $2.00

4. THE AUDIO-TAPE COLLECTION - A LIBRARY MANUAL ON SOURCES, PROCESSING, AND ORGANIZATION. (32pp.), 1973, $2.00

5. A BASIC AUDIO-TAPE COLLECTION - LECTURE PROGRAMS FOR THE ACADEMIC LIBRARY. (28pp.) 1973, $1.00

6. LIBRARY RESOURCES FOR NURSES - A BASIC COLLECTION FOR SUPPORTING THE NURSING CURRICULUM. (45pp.) 1973, $3.00

7. LIBRARY JOB DESCRIPTIONS - EXAMPLES COVERING MAJOR WORK AREAS. (42pp.) 1973, $3.00

8. THE MATURITY OF LIBRARIANSHIP AS A PROFESSION. (166pp., hardback) 1968, $5.00

9. CREATIVITY FOR LIBRARIANS - A MANAGEMENT GUIDE TO ENCOURAGE CREATIVE THINKING. (39pp.) 1973, $3.00

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